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INFLUENCE OF NUTRITION EDUCATION ON STRENGTHENING SOCIETAL RESILIENCE IN HOUSEHOLD FOOD CONSUMPTION: A SURVEY OF HOME ECONOMICS DEPARTMENT, AIFUE OWERRI

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Abstract
This study examined the Influence of nutrition education on strengthening societal resilience in household food consumption: a survey of the home Economics Department, AIFUE Owerri . The study was guided by two research questions and two hypotheses. A descriptive survey research design was adopted. The population consisted of 95 participants, including both staff and students, drawn from the Department of Home Economics, while a sample size of 77 respondents was selected using simple random sampling. Data were collected using a structured questionnaire. The instrument was validated and administered using a 5-point Likert scale. Mean and standard deviation were used to answer research questions, while Chi-square statistics were used to test the hypotheses at 0.05 level of significance. Findings revealed that nutrition education has a high positive influence on sustainable household food consumption, particularly in reducing food waste and improving household food management (x = 4.22 and 4.10). It was also found that nutrition education enhances societal resilience through improved diet planning, food diversification, household gardening, food preservation practices, coping strategies during food shortages, and cooperation in food resource management, with a grand mean of 4.12. The hypotheses tested showed that nutrition education has a statistically significant influence on sustainable household food consumption ($X^2 = 13.45 > 5.99$) and significantly enhances societal resilience for improved household food consumption ($X^2 = 11.28 > 5.99$). The research indicated that nutrition education plays a critical contribution in promoting sustainable household food consumption and strengthening societal resilience within the university community. It was recommended that the university should strengthen nutrition education programmes by integrating practical, skill-based components and organize regular training and awareness campaigns on food management, food diversification, and household food production to improve sustainable dietary practices among staff and students

Keywords: *Nutrition Education, Societal Resilience and Household Food Consumption*

Introduction

Household food consumption behavior is a key determinant of nutritional status and public health. Consumption patterns that do not adhere to the principles of balanced nutrition, such as low intake of fruits and vegetables, high consumption of ultra-processed foods, and irregular eating habits, have been associated with a range of health problems, including undernutrition, overnutrition, and an increased risk of non-communicable diseases (Andueza et al., 2022; Dixit, 2023). These unhealthy dietary practices have contributed to the growing incidence of chronic non-infectious conditions, specifically, malignant tumors, cardiac diseases, carcinomas, severe weight gain and bone density loss.

In order to prevent these conditions, adopting healthier dietary behaviour among others is recognized as a critical strategy. Consequently, pedagogical intervention in dietetics is recognized as a practical and effective approach to enhancing nutritional knowledge, increasing the general populace, as well as, ultimately, enhancing the overall physiological vitality and well-being of the general public, (Manouchehri Naeeni et al., 2014; Mirmiran et al., 2023). Nutrition education is a vital strategy for improving dietary behaviors and promoting sustainable household nutrition. It encompasses the provision of knowledge, development of practical skills, and cultivation of positive attitudes that enable individuals and families to make informed food choices and adopt healthier eating habits. Contemporary evidence suggests that nutrition education and food literacy interventions can significantly improve nutrition knowledge, dietary practices, and long-term health outcomes by empowering individuals to translate nutritional knowledge into healthy eating behaviors (Manna & Vidgen, 2024; Öngün Yilmaz et al., 2025).

Furthermore, nutrition education is increasingly recognized as a key component of public health initiatives aimed at preventing diet-related diseases and promoting sustainable dietary patterns. These educational efforts can be delivered through schools, communities, healthcare settings, digital platforms, and policy-driven programs, targeting individuals, households, and wider populations to foster healthier and more informed food choices. Beyond the mere transmission of information, nutrition education aims to promote positive and sustainable dietary behavior change. It enhances individuals' understanding of the relationship between food and health, nutritional requirements across different stages of life, appropriate food selection and purchasing practices, safe food storage and preparation methods, nutrient retention during cooking, and equitable food distribution within households. Contemporary evidence indicates that nutrition education interventions grounded in behavior change theories can significantly improve dietary practices and food choices across different population groups (Flores-Vázquez et al., 2024; Kachwaha et al., 2024).

Nutrition education strengthens individuals' knowledge, attitudes, and self-efficacy, enabling households to utilize available food resources more effectively and thereby improve dietary quality, nutritional status, and food security. In this regard, nutrition education plays a vital role in enhancing the capacity of individuals, households, and communities to cope with and adapt to food-related challenges, including economic instability, food insecurity, rising food prices, climate-related shocks, and public health emergencies. It equips individuals with the knowledge, attitudes, and practical skills required to make informed food choices, maximize available food resources, and sustain healthy dietary practices, even during periods of crisis (FAO et al., 2023; Kachwaha et al., 2024).

Strengthening societal resilience through effective nutrition education is therefore essential for achieving sustainable household food consumption. Resilience encompasses the capacity of individuals, households, communities, and institutions to anticipate, absorb, withstand, and recover from shocks and stresses in a timely and sustainable manner while preserving their well-being and livelihoods (Béné, 2020; United Nations, 2023). Within the context of food and nutrition security, resilience involves protecting, restoring, and strengthening food systems against disruptions that affect food availability, accessibility, utilization, and stability (FAO et al., 2023). The idea of resilience emphasizes the

importance of clearly recognizing the specific challenges faced by households and communities. These problems can include sudden events like floods, disease outbreaks, conflicts, and economic crises, as well as gradual challenges such as rising food prices, unemployment, climate change, and long-term poverty.

In many cases, several of these problems happen at the same time, making the situation more difficult and seriously affecting household food security and nutrition (Béné, 2020; FAO et al., 2023). Research shows that societal resilience strategies such as household food production, community gardens, cooperative food systems, savings and credit groups, social protection programs, and nutrition support networks play important role in improving food security and nutrition outcomes (Béné, 2020; Akinkuolie et al., 2025; World Bank, 2024). These strategies help households manage food shortages, enhances family income, and other social and economic challenges, while also supporting steady access to healthy and nutritious food Nutrition education plays a vital role in strengthening societal resilience by improving household food consumption practices. This is consistent with the World Health Organization (WHO, 2022), which states that nutrition education promotes the home production of fruits and vegetables, thereby increasing access to nutrient-dense foods while reducing household food costs. It also supports food preservation practices that ensure year-round food availability and help reduce post-harvest losses.

In addition, nutrition education encourages equitable food distribution within households by addressing socio-cultural practices that may disadvantage vulnerable members such as women and children, thereby improving overall nutritional well-being (FAO, 2021; IFAD, 2022). Overall, nutrition education strengthens key resilience strategies that support sustainable and improved household food consumption

Despite the recognized importance of nutrition education in improving dietary practices and strengthening food-related decision-making, empirical evidence shows that increased nutrition knowledge does not always lead to sustained positive changes in eating behaviors. Several studies have reported a persistent gap between what people know about healthy eating and what they actually practice, indicating that awareness alone is insufficient to drive meaningful behavioral change (Dixit, 2023; Mangwane et al., 2024). This gap suggests that nutrition education may not be fully effective unless it is supported by enabling environments and addressed within broader social, cultural, economic, and environmental contexts that influence food choices and consumption patterns.

In many communities, including university settings, households continue to face challenges such as rising food costs, limited access to nutritious foods, and socio-cultural food practices that affect dietary quality and consistency. At Alvan Ikoku Federal University of Education, Owerri, there is limited empirical evidence on how nutrition education influences societal resilience strategies and translates into improved household food consumption among staff, students, and surrounding households. It remains unclear whether existing nutrition education efforts are sufficient to bridge the gap between knowledge and practice and to support households in adapting to food-related challenges. Therefore, this study seeks to investigate the influence of nutrition education in strengthening societal resilience for improved household food consumption at Alvan Ikoku Federal University of Education.

Objectives of the study

The main purpose of the study is to investigate the influence of nutrition education in strengthening societal resilience strategies for improved household food consumption at Alvan Ikoku Federal University of Education. Specifically the study sought to

1. examine the influence of nutrition education on sustainable household food consumption among staff and students of the designated Federal University of Education, Owerri.
2. assess the extent to which nutrition education enhances societal resilience for improved household food consumption within the university community

Research Questions

The study was guided by the following research questions :

1. How does nutrition education influence sustainable household food consumption among staff and students of the designated Federal University of Education, Owerri?
2. How does nutrition education enhance societal resiliencies for improved household food consumption within the university community?

Hypotheses

Based on the specific objectives, the following hypotheses were formulated:

1. **H01:** Nutrition education has no significant influence on sustainable household food consumption among staff and students of Alvan Ikoku Federal University of Education, Owerri.
2. **H02:** Nutrition education does not significantly enhance societal resilience for improved household food consumption within the university community.

Methodology

The study adopted a descriptive survey research design. This design was considered appropriate because it enabled the researcher to collect detailed information from staff and students regarding their experiences, knowledge, and practices related to nutrition education and household food consumption. The target population consisted of 95 respondents, comprising 10 staff and 85 students in the Department of Home Economics. A sample of 77 respondents was selected using simple random sampling, giving each member of the population an equal chance of being selected for participation in the study. The instrument for data collection was a structured questionnaire titled *Nutrition Education in Strengthening Societal Resilience to Household Food Consumption Questionnaire* (NESR-HFCQ). The questionnaire was divided into three sections: Section A covered the respondents' demographic information; Section B focused on the influence of nutrition education on sustainable household food consumption; while Section C examined the extent to which nutrition education enhances societal resilience for improved household food consumption. For data analysis, a 5-point Likert scale was used, comprising Strongly Agree (5), Agree (4), Undecided (3), Disagree (2), and Strongly Disagree (1). The data collected were analyzed using descriptive and inferential statistics. Mean and standard deviation were used to answer the research questions, while the Chi-square statistic was used to test the hypotheses at the 0.05 level of significance.

Results

Research Question 1: How does nutrition education influence sustainable household food consumption among staff and students of the designated Federal University of Education, Owerri?

Table 1: Responses on nutrition education influence sustainable household food consumption among staff and students of designated Federal University of Education, Owerri

SN	Items	N	Mean	Standard Deviation	Remark
1	Improves sustainable household food consumption among staff and students	77	4.22	0.68	Agree
2	Reduces food waste and improves household food management	77	4.10	0.75	Agree
3	It reduces household food waste.	77	4.20	0.72	Agree
4	Promotes healthy and balanced food choices.	77	4.19	0.87	Agree
5	improves household food planning and budgeting	77	4.16	0.79	Agree
	Grand Mean		**4.17**	**0.76**	

Table 1 presents the responses of 77 respondents on the influence of nutrition education on sustainable household food consumption. The results show that all five items were rated Agree**,** with mean scores ranging from 4.10 to 4.22**.** The highest mean score was **4.22** for the view that nutrition education improves sustainable household food consumption, while the lowest was 4.10 for reducing food waste and improving household food management. The grand mean of 4.17 indicates that respondents generally agreed that nutrition education positively influences sustainable household food consumption through improved food management, reduced waste, healthier food choices, and better household food planning and budgeting. The standard deviations, ranging from 0.68 to 0.87, indicate relatively consistent responses among the respondents.

Research Question 2: Does nutrition education enhance societal resilience for improved household food consumption within the university community?

Table 2: shows the ways nutrition education enhances societal resilience for improved household food consumption within the university community.

SN	Items	Mean	Std. Deviation	Remark
1	Nutrition education improves my ability to plan balanced household diets	4.20	0.72	Agree
2	It enhances my food preservation and storage practices.	4.08	0.81	Agree
3	It encourages participation in household gardening and food production	4.12	0.77	Agree
4	It helps me diversify food sources for better nutrition.	4.16	0.69	Agree
5	It strengthens my coping strategies during food shortages	4.06	0.83	Agree
6	It promotes cooperation in managing food resources within the university community.	4.10	0.75	Agree
	Grand Mean	4.12		

Table 2 presents the responses on how nutrition education enhances societal resilience for improved household food consumption within the university community. The results show that all six items were rated Agree**,** with mean scores ranging from 4.06 to 4.20. The highest mean score of 4.20 indicates that nutrition education improves respondents' ability to plan balanced household diets, while the lowest mean of 4.06 shows that it strengthens coping strategies during food shortages. The grand mean of 4.12 indicates that respondents generally agreed that nutrition education enhances societal resilience through improved diet planning, food preservation, household food production, dietary diversification, coping strategies, and cooperation in managing food resources. The standard deviations ranging from **0**.69 to 0.83 indicate relatively consistent responses among the respondents.

Hypotheses

Table 3: Chi-square Test on Nutrition education has no significant influence on sustainable household food consumption among staff and students of the designated Federal University of Education, Owerri.

Hypotheses	X^2 Calculated	X^2 Critical (0.05)	Decision
H01 No Significant influence on the influence of nutrition education on sustainable household food consumption	13.45	5.99	Reject $_{01}$

Table 3 presents the chi-square test analysis on the influence of nutrition education on sustainable household food consumption among staff and students of the designated Federal

University of Education, Owerri. The result shows that the calculated chi-square value (X^2 = 13.45) is greater than the critical value (X^2 = 5.99), α = 0.05 level of significance. In light of the statistical outcomes, the null hypothesis (H01), which postulates the absence of a statistically significant influence of nutrition education on sustainable household food consumption, is rejected. This implies that nutrition education has a statistically significant influence on sustainable household food consumption among staff and students of the university.

Table 4: Chi-square Test for Hypotheses on Nutrition education does not significantly enhance societal resilience for improved household food consumption within the university community

Hypotheses	X^2 Calculated	X^2 Critical (0.05)	Decision
H01 No Significant influence on how nutrition education enhances societal resilience for improved household food consumption	11.28	5.99	Reject H_{02}

Table 4 presents the chi-square test on the influence of nutrition education in enhancing societal resilience for improved household food consumption within the university community. The result shows that the calculated chi-square value (X^2 = 11.28) is greater than the critical value (X^2 = 5.99) at the standard 0.05 alpha level.

Hence, the null hypothesis (H01), which posits that nutrition education does not significantly enhance societal resilience for improved household food consumption, is rejected. This indicates that nutrition education has a statistically significant influence on societal resilience and improved household food consumption among staff and students of the university community

Discussion of Findings

The findings showed that nutrition education has a strong positive influence on sustainable household food consumption among staff and students of the designated Federal University of Education, Owerri. Respondents indicated that nutrition education improves sustainable household food consumption (x = 4.22) and reduces food waste while improving household food management (~~x~~ = 4.10). This suggests that individuals exposed to nutrition education are more likely to adopt efficient and sustainable food practices. This outcome substantiates the research findings reported by Manouchehri Naeeni and co-authors, (2014) and Mirmiran et al. (2023), who reported that nutrition education improves dietary behaviors and promotes healthier food choices at the household level. It also supports Manna and Vidgen (2024), who emphasized that nutrition education enhances food literacy and helps individuals translate knowledge into practical dietary actions.

Similarly, Öngün Yilmaz et al. (2025) noted that nutrition education improves long-term dietary practices by strengthening individuals' ability to make informed food decisions. The findings revealed that nutrition education enhances societal resilience in several ways, including improved diet planning (x = 4.20), food diversification (x= 4.16), household gardening (x = 4.12), food preservation practices (x= 4.08), coping strategies during food shortages (x = 4.06), and cooperation in food resource management (x = 4.10). The grand mean of 4.12 indicates a generally high agreement that nutrition education strengthens resilience strategies for improved household food consumption. This aligns with FAO et al. (2023), who emphasized that nutrition education strengthens household resilience by equipping individuals with skills to manage food resources during crises and shocks such as inflation and food shortages. It also supports Kachwaha et al. (2024), who found that nutrition education improves coping mechanisms and dietary adaptability in vulnerable households.

Furthermore, the finding agrees with WHO (2022), which reported that nutrition education encourages household food production and improves access to nutrient-rich foods,

thereby strengthening food security. In addition, Béné (2020) highlighted that resilience in food systems involves the ability of households to anticipate and adapt to shocks, which is enhanced through knowledge-based interventions like nutrition education.

Conclusion

The study concludes that nutrition education has a significant positive influence on both sustainable household food consumption and societal resilience among staff and students of the designated Federal University of Education, Owerri. It improves dietary planning, reduces food waste, enhances food management practices, and strengthens coping and adaptation strategies during food-related challenges. The statistical tests further confirm that these influences are significant and not due to chance, indicating that nutrition education is a key driver of sustainable and resilient household food practices and consumption within the university community.

Recommendations

Based on the findings, the following recommendations are made:

1. The university should strengthen and expand nutrition education programmes by integrating practical, skill-based components that focus on sustainable household food practices and resilience strategies.
2. Regular training, workshops, and awareness campaigns should be organized to promote effective food management, food diversification, and household-level food production among staff and student

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